Amendments to the Specification:

After the title and before the first line, please add the following new paragraph:

--CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. Application Serial No. 09/868,832 filed June 21, 2001, which is the National Stage of International Application No. PCT/JP00/07343 filed October 20, 2000, the entireties of which are incorporated herein by reference.

Please replace the paragraph beginning at page 1, line 4, with the following amended paragraph:

~~TECHNICAL FIELD~~ FIELD OF THE INVENTION

The present invention relates to a DNA microarray (DNA chip) which specifically reacts with a biochemical specimen and which is used for inspection equipment represented, for example, by a biochip to be used in order to obtain information on a structure of the specimen, especially in which several ~~thousands~~ thousand to not less than ten thousands kinds of different types of DNA fragments are aligned and fixed at a high density as spots on a base plate such as a microscopic glass slide ~~glass~~.

Please replace the paragraph beginning at page 1, line 15, with the following amended paragraph:

~~BACKGROUND ART~~ BACKGROUND OF THE INVENTION

The method of analyzing the genetic structure has been remarkably progressed in recent years. A large number of genetic structures represented by those of human [[gene]] genes have been clarified. The analysis of the genetic structure uses a DNA microarray (DNA chip) in which several ~~thousands~~ thousand to not less than ten thousands kinds of

different types of DNA fragments are aligned and fixed as spots on a base plate such as a microscopic glass slide ~~glass~~.

Please replace the paragraph beginning at page 1, line 24, with the following amended paragraph:

In recent years, there is a demand for enhancing the reproducibility, the quantitative performance in the information obtained from the DNA microarray and obtaining much more information from the DNA microarray. The information obtained from respective spots needs ~~need~~ to be correct, uniform, and complex.

Please replace the paragraph beginning at page 2, line 17, with the following amended paragraph:

The conventional method of forming the spot is based on the supply (stamping) of the sample solution onto the base plate by using the pin. Therefore, the shape of the spot is diversified, for example, due to the shape of the forward end of the pin and/or the residue of the sample solution remaining at the forward end of the pin after the supply. As shown in FIG. 18, spots 200, each of which has ~~a lot of~~ many irregularities at the outer circumferential portion, are formed on a base plate 202.

Please replace the paragraph beginning at page 3, line 9, with the following amended paragraph:

The present invention has been made taking the foregoing problems into consideration, an object of which is to provide a DNA microarray which makes it possible to improve the inspection accuracy for ~~the~~ genetic ~~analysis~~ analyses and which makes it possible to increase the amount of information to be obtained.

Please replace the paragraph beginning at page 3, line 15, with the following amended paragraph:

Another object of the present invention is to provide a DNA microarray which makes it possible to achieve a high degree of concentration of spots and which makes it possible to perform detailed genetic ~~analysis~~ analyses.

Please replace the heading beginning at page 4, line 7, with the following amended heading:

--~~DISCLOSURE~~ SUMMARY OF THE INVENTION--.

Please replace the paragraph beginning at page 11, line 24, with the following amended paragraph:

Especially, the amount of the capture per unit volume is preferably varied by discharging and supplying the capture solution a plurality of times to one spot on the base plate in accordance with the ink-jet system. That is, the capture solution is discharged and supplied a plurality of times in a divided manner without discharging and supplying a large amount of the capture solution at once. Further, the discharge interval is adjusted so that [[the]] a previously formed spot ~~formed by one time of discharge~~ is not widened in spot diameter due to superimposition of the capture solution subsequently discharged ~~next time~~. Accordingly, the amount of the capture supplied to the spot can be increased or decreased without changing the size of the spot. Thus, it is possible to vary the capture density per unit area.

Please replace the paragraph beginning at page 14, line 11, with the following amended paragraph:

~~BEST MODE FOR CARRYING OUT THE INVENTION~~ DETAILED DESCRIPTION OF THE DRAWINGS

Embodiments of the DNA microarray ~~included in embodiments of the biochip~~ according to the present invention will be explained below with reference to FIGS. 1 to [[??]] 18.

Please replace the paragraph beginning at page 16, line 12, with the following amended paragraph:

The precipitated DNA fragments are rinsed with ethanol, followed by centrifugation. After that, the DNA fragments are dried to produce the DNA powder (purification step S12). A certain amount of x1 TE buffer is added to the obtained DNA powder, followed by being left to stand for several hours to completely dissolve the DNA powder (mixing step S13). Thus, the sample solution is prepared. The concentration of the sample solution at this stage is 0.1 to 10 ~~μg/μ liter~~ μg/μliter.

Please replace the paragraph beginning at page 39, line 1, with the following amended paragraph:

In the embodiment of the present invention, as shown in FIGS. 16 and 17, for example, a first layer spot 80A, which is formed on the base plate 10, has a so-called doughnut-shaped configuration in which a peripheral portion 120 (see FIG. [[16]] 17) is ridged, for example, by adjusting the discharge power or the like of the micropipette 34. Further, after the spot 80A having the doughnut-shaped configuration is dried, a spot 80B, which contains a different DNA fragment and which has a substantially circular planar configuration, is formed on the spot 80A. Accordingly, the spots 80A, 80B, which contain

the different samples respectively, can be formed at an identical spot formation position. In this case, it is possible to greatly reduce the arrangement area for the spot 80. It is possible to miniaturize the DNA microarray 20 itself.